

2. Amino Acids and Chirality

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Amino acids are among the most heavily studied organic compound class in carbonaceous chondrites. The abundance, distributions, enantiomeric compositions, and stable isotopic ratios of amino acids have been determined in carbonaceous chondrites from a range of classes and petrographic types, with interesting correlations observed between these properties and the class and type of the chondrites. In particular, isomeric distributions appear to correlate with parent bodies (chondrite class). In addition, certain chiral amino acids are found in enantiomeric excess in some chondrites. The delivery of these enantiomeric excesses to the early Earth may have contributed to the origin of the homochirality that is central to life on Earth today. This talk will explore the amino acids in carbonaceous chondrites and their relevance to the origin of life.